

**Case Summary.** Young-onset triple vessels CTO (LAD ostial CTO, RCA mid CTO, LCX OM proximal CTO) were treated by staged PCI.

At first, RCA mid CTO was performed supported IABP.

Next, LAD ostial CTO and LCX OM proximal CTO were performed one week later.

We could treat young-onset triple vessels CTO by staged PCI.

#### TCTAP C-095

#### Contemporary Reverse CART at LCX CTO PCI

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#### [CLINICAL INFORMATION]

**Patient initials or identifier number.** Z. J.

**Relevant clinical history and physical exam.** 60' years old man, He suffered from effort angina in December 2013. In this month CAG had done. CAG showed LCX mid part CTO and LAD ostial lesion. At the same time PCI was performed for LCX. But this session was unsuccessful. So PCI for LAD was performed. In November 2014 second attempt for LCX CTO was performed.

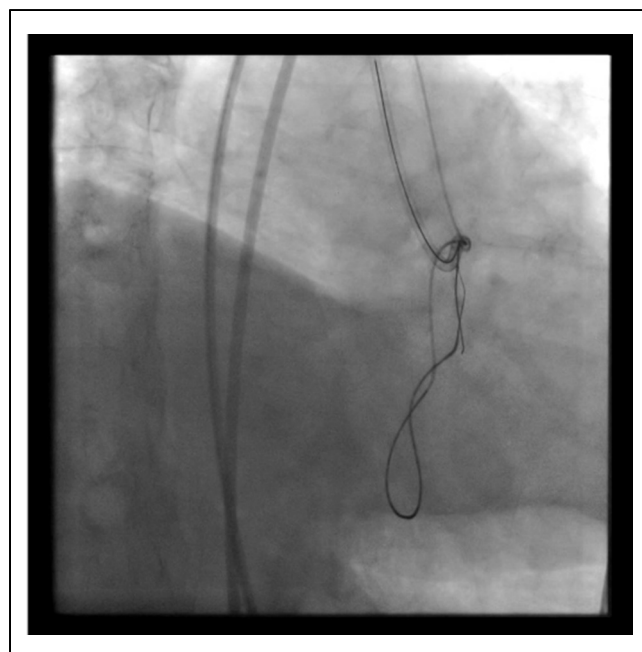
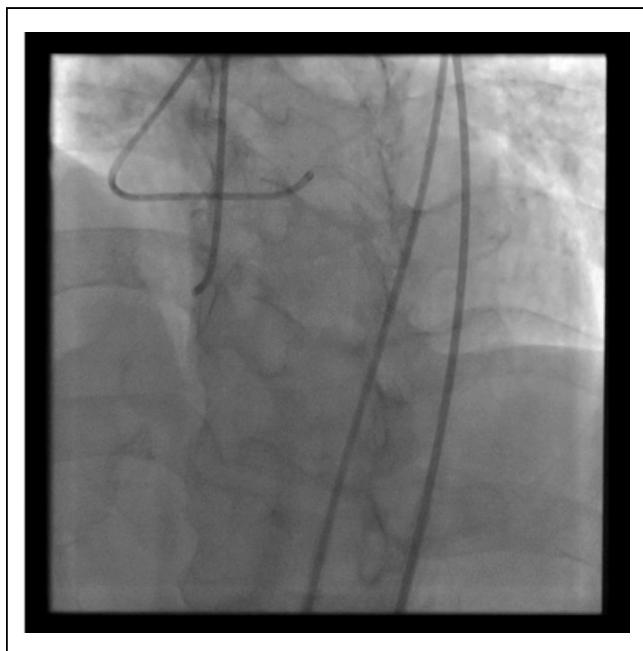
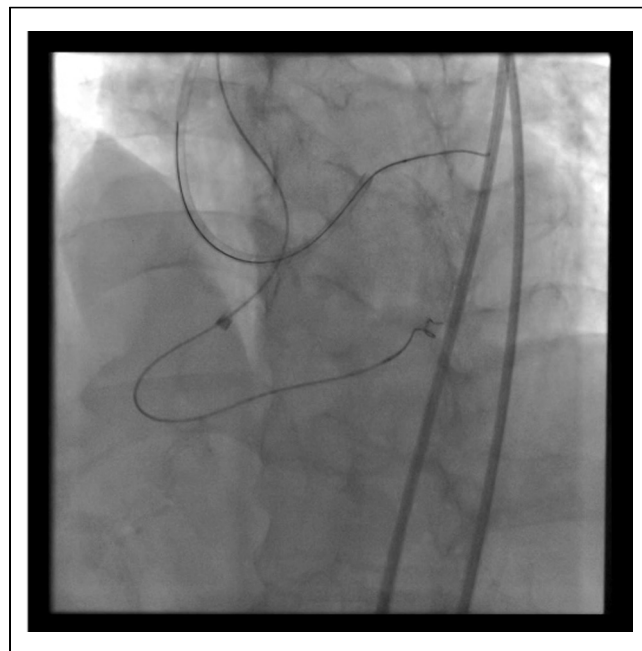
**Relevant test results prior to catheterization.**

#### Relevant catheterization findings:

LCX CTO lesion was tapered type, 20mm lesion length, no severe calcification and distal part narrowing. Collaterals were AV to LCX epicard (good) and distal AV to LCX(fine).

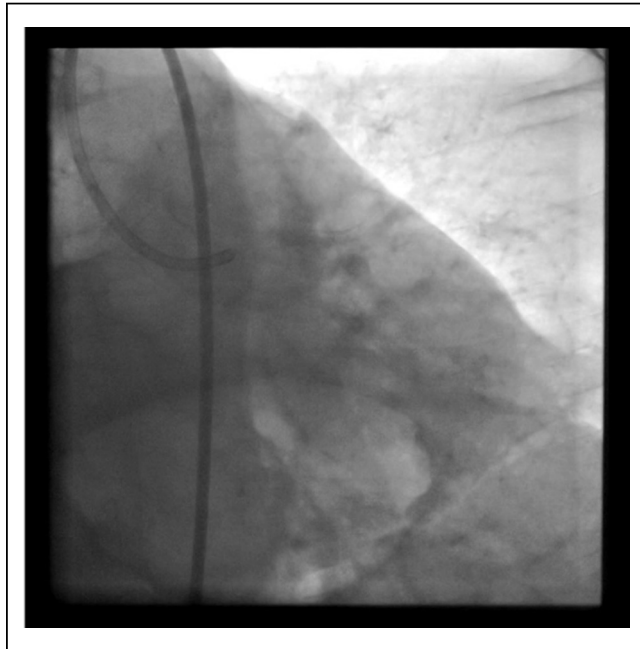


that retrograde Gaia2 wire touched antegrade inflated balloon by rotational angio without contrast. I deflated antegrade balloon then retrograde Gaia2 wire was getting advanced to CTO proximal lumen automatically. Finally I inserted Gaia2 wire to antegrade guiding catheter. After that I did externalization using RG3. Next step was insertion wire to LCX distal part using Crusade double lumen catheter. Eventually this procedure succeeded, I could insert Sion wire to LCX distal part. After that I released retrograde system. I had done ballooning and stenting. And then I took final angio.



#### [INTERVENTIONAL MANAGEMENT]

**Procedural step.** At first, I did antegrade PCI and antegrade preparation also. I negotiated using Ultimate bro3 wire and Gaia1 wire with Corsair 135cm. But this procedure failed. I switched to do retrograde PCI. Before I negotiated proximal AV-LCX channel by Sion wire with Corsair 150cm, I inserted balloon from antegrade. The reason was that I would like to do "Contemporary reverse CART". After antegrade 2.0mm balloon inflated, I started to negotiate retrograde channel. I crossed this channel using Sion and SUOH wires with Corsair 150cm. I got advanced Corsair to distal lumen of CTO lesion, I exchanged wire to Gaia 2. Gaia 2 wire easily penetrated to CTO distal cap and lesion and controlled to touch the antegrade inflated balloon. I recognized



**Case Summary.** In contemporary reverse CART, key point is antegrade preparation. First benefit is easy to control retrograde wire. The reason is that antegrade preparation (antegrade ballooning) had done before making big subintimal space by retrogradewire. Second benefit is that this method can avoid severe vessel injury like big subintima or hematoma. In this LCX CTO case, contemporary reverse CART was performed and good result was provided.

#### TCTAP C-096

#### Successful PCI for LCx CTO with Severe Calcification Using the Reverse-CART Technique with Retrograde Wire Externalization to Ipsilateral 2 Guiding System via LAD-Septal-PL Channel

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#### [CLINICAL INFORMATION]

**Patient initials or identifier number.** M.Y

**Relevant clinical history and physical exam.** A 63 years old female with effort chest pain was admitted to our hospital for percutaneous coronary intervention (PCI) to left circumflex coronary artery (LCx) with severe calcification. Several PCIs were performed for left main-left ascending descending coronary artery (LAD) and right coronary artery (RCA) before.

**Relevant test results prior to catheterization.** The trans thoracic echocardiography showed inferior-posterior wall motion abnormality with normal LV contractility. No other non-invasive studies were performed.

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|--|--|---|--|
| <b>○LV function and Dimension</b><br>IVSTd 8 mm LVDd 50 mm LAD 38 mm EF 60 %<br>PWTd 9 mm LVDs 34 mm IVC 2 mm FS 32 %  |  |   |  |
| <b>○Aortic Valve</b><br>AOD 27 mm<br>石灰化 (+) (-)<br>圧差差 (+) (-)<br>3.1 mmHg  |  | <b>○Mitral Valve</b><br>MVA - cd<br>石灰化 (+) (-)<br>(AML, PML)<br>prolapse (+) (-)<br>(AML, PML)   |  |
| <b>○Rhythm</b><br>Sinus At. pacing その他 ( )<br>PVC PAC HR [ ]   |  | <b>○Doppler</b><br>MR (trivial, 1/4, 2/4, 3/4, 4/4, +)<br>AR (trivial, 1/4, 2/4, 3/4, 4/4, +)<br>TR (trivial, 1/4, 2/4, 3/4, 4/4, +)<br>PR (trivial, 1/4, 2/4, 3/4, 4/4, +)<br>右心系拡張 (+) 推定PAP - mmHg |  |
| <b>○Pericardial Effusion</b><br>(なし), 微量, 少量, 中等量, 多量<br><b>○Pleural Effusion</b><br>(なし, 左, 右, 両)   |  |   |  |
| <b>○Technical Report...</b><br>Parasternal area (no, poor) clear<br>apical area (no, poor) clear<br>※心尖部ほとんど描出できず、逆流等の評価<br>参考値として下さい。<br>1. Asynergy (+)<br>(Basal ~ Mid: Inferior ... hypo Severe hypo<br>Septal ... hypo<br>LV内径拡大 (-)<br>LVH (-) EF 60% (BE-ド)<br>2. MR trivial LA拡大 (-)<br>3. TR trivial 推定PAP測定制できず<br>右心系・IVC拡張 (-)<br>E/A = 74/82 = 0.89<br>DCT 250 msec |  |   |  |



**Relevant catheterization findings.** The target was a mid LCx chronic total occlusion (CTO) lesion with severe calcification. The distal LCx was filled through the rich collaterals of the LAD via the septal perforators.